



TEST EQUIPMENT

AUTOMOTIVE



DISCOVER DIESEL EXCELLENCE



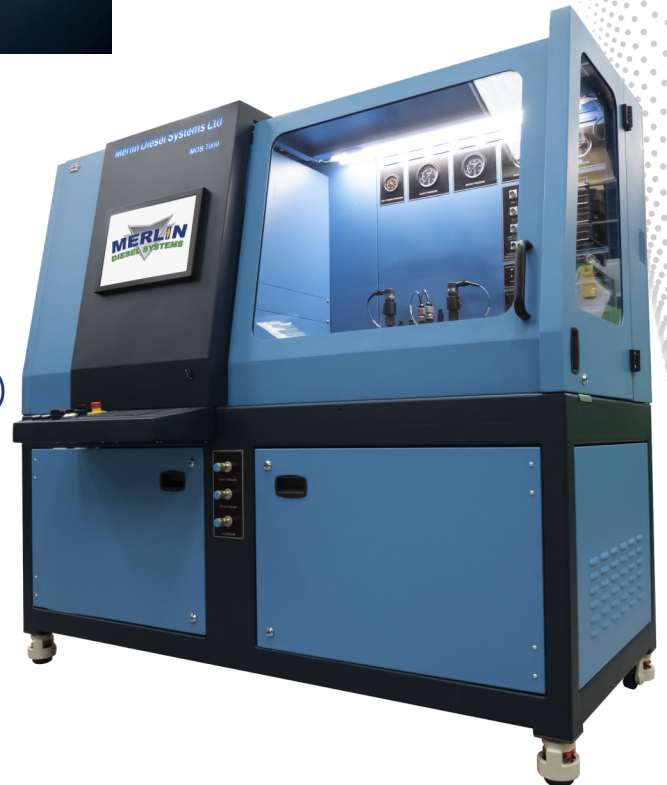
MDS 7000

FEATURING KB1000-L CAT EUI CODING SOLUTIONS

Multifunctional Test Stand for All Applications

Features:

- Ergonomic Interface
- Accurate
- Easy access for maintenance
- Large work area with opening side door
- S1000 Coding Software Included - Denso
- Delphi, Siemens, John Deere, CAT/Perkins
- KB1000-L CAT EUI Coding inbuilt (optional)
- All-makes Test plans - 48 hour response
- Digital 24" LCD Touch Screen
- Common Rail - Tests up to 2400 bar
- EUI Compatible



Complete Test Solution Covering:



Common Rail



EUP



HPO



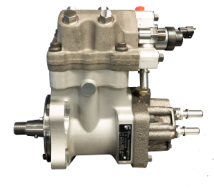
HEUI



CAT/Perkins



Bosch CPN5



Cummins QSK



Common Rail



Bosch EUI



Delphi EUI



CAT EUI



CAT



Navistar



CAT C4/C6



Cummins HPI



Cummins XPI QSK

MDS7000 TEST STAND

SPECIFICATIONS

DRIVE MOTOR	20 hp variant
SPEED RANGE	30-2500 rpm
DISPLAY	Digital 24" monitor
TEST OIL SUPPLY PUMP	600 litres/hr
HYDRAULIC OIL SUPPLY PUMP	600 litres/hr
TEST OIL FEED PRESSURE	0-27 bar
TEST OIL PHASING PRESSURE	0-40 bar
FLOWMETERS	4 gear flowmeters $\pm 1\%$ of reading
TACHOMETER	± 1 rpm. Updates every 0.5 seconds
WATER SUPPLY	160 litres/hr min 3 bar required
TEMPERATURE CONTROL	0-60°C $\pm 1^\circ\text{C}$ at 40°C
CALIBRATION FLUID (TEST OIL)	Shell Calibration Fluid 4113 now S9365
WORK TABLE	125mm Centre height
TEST OIL TANK CAPACITY	40 litres
HRDRAULIC OIL TANK CAPACITY	40 litres
Dimensions	
Height:	1862mm
Length:	1209mm
Width:	2080mm
Weight:	920Kg
ELECTRICAL SUPPLY	380-440v/3 phase/50Hz
WATER SUPPLY	160 litres/hr (35 imperial gallons/hr) 2-3 bar

S4000 MK 2

WITH INTERGRATED S1000 CODING Common Rail Injector Test Stand

The **Merlin S4000 MK2** is a fully automatic Common Rail Injector test bench.

Ergonomically designed to cater for all sizes of workshop, the machine has been specifically developed to test Injectors from all the main manufacturers which include: Bosch, Delphi, Denso, Continental and CAT/Perkins/Bosch large engine.

The S4000 MK2 tests the performance of injectors and delivery under different working conditions as follows:-



FEATURES

- Automatically measures & displays the fuel delivery & return quantity under full load, idling & pre-injection.
- Tests oil temperature controlled to 40°C +/- 2°C.
- Customer information & data can be inputted via the keypad.
- Easy to use clamping assembly.
- Equipped with original Bosch CP3 pump, rail, DRV and ZME.
- Test injection & return volume under VL, TL, LL, VE and VE2 status.
- 0-2000 bar.
- Shorter injector test time, improving overall efficiency and energy consumption over the previous S4000 model.

S4000 MK 2 TEST STAND

SPECIFICATIONS

DRIVE MOTOR	10HP (7.5kW)
SPEED RANGE	0-1000rpm
DISPLAY	Digital 19" monitor
FLOWMETER	High capacity Flowmeter
TEST OIL SUPPLY PUMP	Bosch CPI
HIGH PRESSURE RAIL AND DRV	Bosch original parts
TEST RANGE OF RAIL PRESSURE	0-2000 bar
FLOWMETER FILTRATION	1 spin-on cartridge element and 1 in-line filter
TEST OIL TANK CAPACITY	28 Litres
TEST OIL HEATER	1 kW rating
OIL COOLER UNIT	Refrigerant gas R404A
TEMPRATURE CONTROL	0-60°C ± 2°C at 40°C
CABLE	4-6mm 2 x 5 core
Dimensions	
Height:	1620mm
Length:	1000mm
Width:	820mm
Weight:	350Kg
ELECTRICAL SUPPLY:	200-240v/3 phase/60Hz
	380-440v/3 phase/50Hz

EM SERIES

EM (Electronic Metering)

Multifunctional Test Stand for All Rotary, Inline, CR & EUI

The Merlin EM Series are a range of test stands designed for the calibration of traditional in-line and rotary fuel injection pumps of various sizes from all the main manufacturers.

Available with 20 or 30 bhp drives with 8 or 12 cylinder options.

The EM range can now cater for most manufacturers Common Rail Pumps and Injectors as well as integrating with the Hartridge HK1400 Expert EUI and EUP test solution.

The EM Series benefits from a highly precise electronic metering system that utilises 8 to 12 individual flowmeters depending on the model.

This is displayed on a 24" LCD monitor.



APPLICATIONS:

- 'A' type Inline BOSCH, SIMMS and MINIMEC.
- Mechanical/Rotary BOSCH, DELPHI, STANADYNE, DENSO and ZEXEL.
- All Makes EUI/EUP Cambox.
- Submersible pumps (appropriate Cambox required).
- Common Rail Pumps and Injectors from BOSCH, DELPHI, CONTINENTAL VDO and DENSO.

EM SERIES TEST STAND

SPECIFICATIONS

DRIVE MOTOR	10HP (7.5kW)
SPEED RANGE	0-1000rpm
DISPLAY	Digital 24" monitor
MEASURING RANGE	8/12 Cylinder 0-800cc
TEST OIL SUPPLY PUMP	600 litres/hr (tandem pump)
LUBE OIL SUPPLY PUMP	600 litres/hr (tandem pump)
TEST OIL FEED PRESSURE	0-4 bar
TEST OIL PHASE	0-40 bar
FLOWMETER	0-800cc Oval flowmeter $\pm 1\%$ of reading
TACHOMETER	± 1 rpm. Updates every 0.5 seconds
WATER SUPPLY	160 litres/hr min 3 bar required
TEMPERATURE CONTROL	0-60°C $\pm 1^\circ$ at 40°C
CALIBRATION FLUID (TEST OIL)	Shell calibration fluid 41113 now S9365
WORK TABLE	125mm Centre height
AIR BOOST	0-4 bar
Dimensions	
Height:	1780mm
Length:	2200mm
Width:	780mm
Weight:	700Kg
ELECTRICAL SUPPLY:	2000-240v/3 phase/60Hz 380-440v/3 phase/50Hz
WATER SUPPLY	160 Litres/hr (35 gallons/hr) 2-3 bar
AIR SUPPLY	5.5-6.9 bar (80-100psi)

GM SERIES

GM (Graduated Metering)

Multifunctional Test Stand for Rotary and Inline pumps

The **Merlin GM** test stand is principally designed for the calibration of automotive fuel injection pumps. Designed and developed with the following functions:

APPLICATIONS

- 'A' type Inline BOSCH, SIMMS and MINIMEC
 - Mechanical/Rotary BOSCH, DELPHI, STANADYNE, DENSO and ZEXEL
 - HK1400 All makes Cambox
 - Submersible pumps (appropriate Cambox required)
 - Bluetooth connected removable key-board.
 - Graduated test tube metering
 - Forward mounted potentiometer, drive and fuel controls
 - Robust design with all steel frame construction.
 - Water cooled and internally heated with air and power supply.
 - 8 or 12 cylinder optional.
 - 20 & 30 hp available.
 - Optional injectors 8 or 12 cylinder.
 - The calibrating head is pivot mounted for right or left hand operation and height adjustable.
 - Factory fitted equipment: 12v & 24v DC supply. Air boost.
 - Smart wheels system.
 - Results print out.
- Linux operating system



GM SERIES TEST STAND

SPECIFICATIONS

DRIVE MOTOR	20 & 30hp variants
SPEED RANGE	0-4100rpm
MEASURING RANGE	8/12 Cylinder
TEST OIL SUPPLY PUMP	600 litres/hr (tandem pump)
LUBE OIL SUPPLY PUMP	600 litres/hr (tandem pump)
TEST OIL FEED PRESSURE	0-4 bar
TEST OIL PHASE	0-40 bar
FLYWHEEL	Inertia value: 0.25kg ²
METERING	0-150cc/0-45cc
TACHOMETER	±1 rpm. Updates every 0.5 seconds
WATER SUPPLY	160 litres/hr min 3 bar required
TEMPERATURE CONTROL	0-60°C ±1° at 40°C
CALIBRATION FLUID (TEST OIL)	Shell calibration fluid 41113 now S9365
WORK TABLE	125mm Centre height
AIR BOOST	0-4 bar
Dimensions	
Height:	1780mm
Length:	2200mm
Width:	780mm
Weight:	700Kg
ELECTRICAL SUPPLY:	380-440v/3 phase/50Hz
WATER SUPPLY	160 Litres/hr (35 gallons/hr) 2-3 bar
AIR SUPPLY	5.5-6.9 bar (80-100psi)

KB 1000 CAT EUI CODING

Our New to range **KB1000** and **KB1000-L** are two Caterpillar electronic unit injectors (EUI) coding solutions, designed for workshops operating the MDS7000 and workshops currently running all-makes benches. This unique solution creates correction offsets (trim codes) for the CAT 3500 and C Series EUI.

The **KB1000** is a stand-alone interface and comes complete with the cam-box. This software allows the operator to dynamically set the injectors fuelling by inputting a trim code from a database.

The **KB1000-L** software, inbuilt on the MDS7000, generates trim codes from the fuelling of the injector on test.



S1000 CODING – Version 8

Our S1000 Common Rail Injector Coding software solution covers part number references across all Common Rail Diesel Injector manufacturers: Bosch, Delphi, Continental and Denso and Caterpillar.

Our unique software is a cost effective solution to generate these correction offsets (Trim codes).

The software enables the user to create C2i/C3i, QR and Bosch IMA correction codes and covers Euro 3,4,5 and we are extending our coverage to Euro 6.

We have recently expanded the application database for our S1000 Common Rail Injector coding software solution.

Included in our update are new, popular Denso and Delphi Injector references. This takes our comprehensive injector part number coverage to over 300. Our database is constantly being updated and we have version releases several times a year.

S1000 coding is compatible with a wide variety of test stands:



Bosch 205



Bosch 815



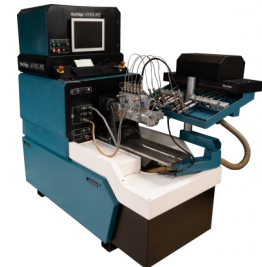
Bosch 708



Hartridge Cri-Pro/PC



Hartridge Sabre Series



Hartridge AVM



MDS S4000



MDS S7000



MDS S8000



- Diesel Pump / Injector / Test and Repair
- Suppliers of New and Remanufactured Pumps / Injectors
- Technical Support
- Test Equipment
- Parts Sales
- Injector Software Coding Solutions
- Conference and Training Facilities

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COLCHESTER FUEL INJECTION

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